

**Amendments to the Claims:**

Please enter the following amendments to the claims, with insertions indicated by underlining and deletions by strikethrough.

1. (currently amended) A chimeric or humanized MN-3~~monoclonal antibody (Mab)~~ antibody or fragment thereof that binds NCA90 ~~or NCA95, wherein when the Mab or fragment thereof binds NCA90 the Mab or fragment thereof is chimeric, partially humanized or fully humanized and wherein when the Mab or fragment thereof binds NCA95 the Mab or fragment thereof is either fully humanized or chimeric, partially humanized or fully humanized~~ BW 250/183.
2. (canceled)
3. (currently amended) The antibody or fragment of claim 1, comprising the MN-3 light chain CDR sequences CDR1 (RSSQSIVHSNGNTYLE, SEQ ID NO:1), CDR2 (KVSNRFS, SEQ ID NO:2) and CDR3 (FQGSHVPPT, SEQ ID NO:3) and the MN-3 heavy chain CDR sequences CDR1 (NYGMN, SEQ ID NO:4), CDR2 (WINTYTGEPTYADDFKG, SEQ ID NO:5) and CDR3 (KGWMDFNSSLDY, SEQ ID NO:6).
4. (currently amended) The antibody or fragment thereof of claim 3~~4~~, wherein the antibody or fragment is a humanized antibody or fragment comprising: (A) ~~at least one complementarity-determining region (CDR) of a murine MN3 Mab selected from: (i) a light chain variable region of the chimeric, partially humanized or fully humanized MN3 antibody comprising a CDR1 comprising an amino acid sequence RSSQSIVHSNGNTYLE (SEQ ID NO:1), a CDR2 comprising an amino acid sequence KVSNRFS (SEQ ID NO:2) or a CDR3 comprising an amino acid sequence FQGSHVPPT (SEQ ID NO:3); or (ii) a CDR of the heavy chain variable region of the chimeric, partially humanized or fully humanized MN3 antibody comprising a CDR1 comprising an amino acid sequence of NYGMN (SEQ ID NO:4), a CDR2 comprising an amino acid sequence of WINTYTGEPTYADDFKG (SEQ ID NO:5), or a CDR3 comprising an amino acid sequence of KGWMDFNSSLDY (SEQ ID NO:6); and (B) at least one~~ the framework (FR) region sequences of the light and heavy chain variable regions of a human antibody ~~under~~ at least one light and heavy chain constant regions of a human antibody.

5. (currently amended) The antibody or fragment thereof of claim 4, wherein at least one of the FRs of the light and heavy chain variable regions of the humanized MN-3 antibody or fragment thereof comprises at least one amino acid substituted with the corresponding amino acid of the murine MN-3 MN3 antibody or fragment thereof.
6. (currently amended) The antibody or fragment thereof of claim 4, wherein the at least one amino acid from the murine MN-3 MN3 antibodyMab is ~~at least one amino acid~~ selected from the group consisting of amino acid residue 27, 30, 67, 68, 69 and 94 of the murine MN-3 heavy chain variable region sequence or amino acid residue 20, 22, 39, 60, 70 and 100 of the murine MN-3 light chain variable region sequence of FIG. 4B.
7. (canceled)
8. (currently amended) The antibody or fragment thereof of claim 3, wherein the antibody or fragment thereof comprises the amino acid sequences of cMN-3VK (SEQ ID NO:13) and cMN-3VH (SEQ ID NO:15)is encoded by a portion of a ~~cMN3Vk nucleotide sequence~~ of FIG. 2A.
9. (currently amended) The antibody or fragment thereof of claim ~~43~~, wherein the antibody or fragment thereof comprises the amino acid sequences of hMN-3VK (SEQ ID NO:18) and hMN-3VH (SEQ ID NO:21)is encoded by a portion of a ~~cMN3VH nucleotide sequence~~ of FIG. 2B.
- 10-13. (canceled)
14. (original) The antibody or fragment thereof claim 1, wherein the fragment is selected from the group consisting of Fv, F(ab')<sub>2</sub>, Fab' and Fab.
15. (currently amended) ~~The A diagnostic/detection or therapeutic immunoconjugate comprising an antibody component that comprises an antibodyMab or fragment thereof of claim 1, or an antibody fusion protein or fragment thereof that comprises the antibody or fragment thereof of claim 1, wherein the antibody component is~~ wherein the antibody or fragment is bound to at least

one diagnostic/detection agent or at least one therapeutic agent or is part of a fusion protein.

16. (currently amended) The antibody or fragment thereof ~~diagnostic/detection immunconjugate~~ of claim 15, wherein the diagnostic/detection agent comprises a at least one photoactive diagnostic/detection agent, a chromagen or dye, a radionuclide with an energy between 20 and 10,000 keV, a gamma-, beta- or a positron-emitting isotope, a contrast agent, a paramagnetic ion, an ultrasound-enhancing agent, a liposome or a radiopaque compound.

17-28. (canceled)

29. (currently amended) The antibody or fragment thereof ~~therapeutic immunconjugate~~ of claim 15, wherein the therapeutic agent is selected from the group consisting of a radionuclide, boron, gadolinium or uranium atoms, an immunomodulator, a cytokine, a hormone, a hormone antagonist, an enzyme, an enzyme inhibitor, a photoactive therapeutic agent, a cytotoxic drug, a toxin, an angiogenesis inhibitor, a different antibody and a combination thereof.

30. (canceled)

31. (currently amended) The antibody or fragment thereof ~~therapeutic immunconjugate~~ of claim 29~~30~~, wherein the drug is selected from the group consisting of antimitotic, alkylating, antimetabolite, angiogenesis-inhibiting, apoptotic, alkaloid, COX-2-inhibiting and antibiotic agents and combinations thereof.

32. (currently amended) The antibody or fragment thereof ~~therapeutic immunconjugate~~ of claim 29~~30~~, wherein the drug is selected from the group consisting of nitrogen mustards, ethylenimine derivatives, alkyl sulfonates, nitrosoureas, triazenes, folic acid analogs, anthracyclines, taxanes, COX-2 inhibitors, pyrimidine analogs, purine analogs, antibiotics, enzymes, epipodophyllotoxins, platinum coordination complexes, vinca alkaloids, substituted ureas, methyl hydrazine derivatives, adrenocortical suppressants, hormone antagonists, enzyme inhibitors, endostatin, taxols and other taxanes, camptothecins, doxorubicins ~~and their analogs,~~ and a combination thereof.

33. (canceled)

34. (currently amended) The antibody or fragment thereof ~~therapeutic immunoconjugate~~ of claim ~~29~~33, wherein the toxin is selected from the group consisting of ricin, abrin, alpha toxin, saporin, ribonuclease (RNase), DNase I, Staphylococcal enterotoxin-A, pokeweed antiviral protein, gelonin, diphtherin toxin, Pseudomonas exotoxin, and Pseudomonas endotoxin.

35. (currently amended) The antibody or fragment thereof ~~therapeutic immunoconjugate~~ of claim 29, wherein the immunomodulator is selected from the group consisting of a cytokine, a stem cell growth factor, a lymphotoxin, a hematopoietic factor, a colony stimulating factor (CSF), an interferon (IFN), a stem cell growth factor, erythropoietin, thrombopoietin, an antibody and a combination thereof.

36. (currently amended) The antibody or fragment thereof ~~therapeutic immunoconjugate~~ of claim 35, wherein the lymphotoxin is tumor necrosis factor (TNF), the hematopoietic factor is an interleukin (IL), the colony stimulating factor is granulocyte-colony stimulating factor (G-CSF) or granulocyte macrophage-colony stimulating factor (GM-CSF)), the interferon is interferons- $\alpha$ , - $\beta$  or - $\gamma$ , and the stem cell growth factor designated "S1 factor".

37. (currently amended) The antibody or fragment thereof ~~therapeutic immunoconjugate~~ of claim 35, wherein the cytokine is selected from the group consisting of IL-1, IL-2, IL-3, IL-6, IL-10, IL-12, IL-18, IL-21, interferon- $\gamma$ , TNF- $\alpha$  and a combination thereof.

38. (canceled)

39. (currently amended) The antibody or fragment thereof ~~therapeutic immunoconjugate~~ of claim 29, wherein the radionuclide is selected from the group consisting of P-32, P-33, Sc-47, Fe-59, Cu-64, Cu-67, Se-75, As-77, Sr-89, Y-90, Mo-99, Rh-105, Pd-109, Ag-111, I-125, I-131, Pr-142, Pr-143, Pm-149, Sm-153, Tb-161, Ho-166, Er-169, Lu-177, Re-186, Re-188, Re-189, Ir-194, Au-198, Au-199, Pb-211, Pb-212, and Bi-213, Co-58, Ga-67, Br-80m, Tc-99m, Rh-103m,

Pt-109, In-11, Sb-119, I-125, Ho-161, Os-189m, Ir-192, Dy-152, At-211, Bi-212, Ra-223, Rn-219, Po-215, Bi-211, Ac-225, Fr-221, At-217, Bi-213, Fm-255 and combinations thereof.

40-47. (canceled)

48. (currently amended) An antibody fusion protein comprising a first antibody or fragment according to claim 1, attached to a second antibody or fragment.~~The diagnostic/detection or therapeutic immunoconjugate according to claim 24, wherein the diagnostic/detection or therapeutic agent is bound to the Mab or fragment thereof by means of a carbohydrate moiety.~~

49. (currently amended) The antibody fusion protein of claim 48, wherein the second antibody or fragment is an antibody or fragment according to claim 1~~An antibody fusion protein or fragment thereof comprising at least two Mabs or fragments thereof, wherein the Mabs or fragments thereof are selected from the Mab or fragment thereof of claim 1.~~

50. (currently amended) The antibody fusion protein of claim 48, wherein the second antibody or fragment binds to an antigen other than NCA90~~An antibody fusion protein or fragment thereof comprising at least one first Mab or fragment thereof of claim 1 and at least one second Mab or fragment thereof, other than the Mab or fragment thereof of claim 1.~~

51. (currently amended) ~~The antibody fusion protein or fragment thereof of claim 49, further comprising a diagnostic/detection or therapeutic agent conjugated to the fusion protein or fragment thereof.~~

52. (currently amended) ~~The antibody fusion protein or fragment thereof of claim 50~~49, wherein the second antibody or fragment~~Mab~~ is binds to a granulocyte-associated antigen~~antibody~~.

53. (withdrawn) A method of treating a malignancy in a subject, comprising the step of administering to the subject a therapeutically effective amount of an antibody or fragment according to claim 1, formulated in a pharmaceutically acceptable vehicle.

54. (withdrawn) A method of treating a malignancy in a subject, comprising the step of administering to the subject a therapeutically effective amount of an immunoconjugate or fragment thereof of claim 15, formulated in a pharmaceutically acceptable vehicle.
55. (withdrawn) A method of diagnosing/detecting a malignancy in a subject, comprising the step of administering to the subject a diagnostically effective amount of an antibody or fragment thereof according to claim 1, formulated in a pharmaceutically acceptable vehicle.
56. (withdrawn) A method of diagnosing/detecting a malignancy in a subject, comprising the step of administering to the subject a diagnostically effective amount of a immunoconjugate or fragment thereof according to claim 15, formulated in a pharmaceutically acceptable vehicle.
57. (withdrawn) A method of treating or diagnosing/detecting a malignancy in a subject, comprising the step of administering to the subject a therapeutically or diagnostically effective amount of a fusion protein or fragment thereof of claim 49, formulated in a pharmaceutically acceptable vehicle.
58. (withdrawn) A method of treating or diagnosing/detecting a malignancy in a subject, comprising (i) administering to a subject in need thereof the antibody or fragments thereof of claim 1; (ii) waiting a sufficient amount of time for the antibody or fragment thereof that does not bind to the target to clear the subject's bloodstream; and (iii) administering to the subject a carrier molecule comprising a diagnostic agent, a therapeutic agent, or a combination thereof, that binds to a binding site of the antibody.
59. (withdrawn, currently amended) A DNA sequence comprising a nucleic acid encoding an antibodyMab or fragment thereof selected from the group consisting: (A) a antibodyMab or fragment thereof of claim 1; (B) an antibody fusion protein or fragment thereof comprising at least two of the antibodiesMabs or fragments thereof; (C) an antibody fusion protein or fragment thereof comprising at least one first antibodyMab or fragment thereof comprising the antibodyMab or fragment thereof of claim 1 and at least one second antibodyMab or fragment thereof, other than the antibodyMab or fragment thereof of claim 1; and (D) an antibody fusion

protein or fragment thereof comprising at least one first antibodyMab or fragment thereof comprising the antibodyMab or fragment thereof of claim 1 and at least one second antibodyMab or fragment thereof, other than the antibodyMab or fragment thereof of claim 1 wherein the second antibodyMab is selected from the group consisting of MN-2, MN3, MN-15, NP-1, NP-2, BW 250/183, and antibodies against NCA-90, NCA-95, CD15, or CD33.

60. (withdrawn) An expression vector comprising the DNA sequence of claim 59.

61. (withdrawn) A host cell comprising the DNA sequence of claim 59.

62. (withdrawn) A method of delivering a diagnostic/detection or therapeutic agent, or a combination thereof, to a target comprising (i) providing a composition comprising an immunoconjugate that comprises the antibody or fragment thereof of claim 1 and (ii) administering to a subject in need thereof the composition.

63. (withdrawn, currently amended) The method of claim 62, wherein the antibodyMab antibody is administered in a dosage of 20 to 2000 milligrams protein per dose.

64. (withdrawn) The method of claim 62, wherein the dosage is repeatedly administered.

65. (withdrawn, currently amended) A method of diagnosing or detecting a malignancy in a subject comprising (i) performing an in vitro diagnosis assay on a specimen from the subject with a composition comprising a antibodyMab or fragment thereof or a antibody fusion protein or fragment thereof of claim 1.

66. (withdrawn) The method of claim 65, wherein the in vitro diagnosis assay is selected from the group consisting of immunoassays, RT-PCR and immunohistochemistry.

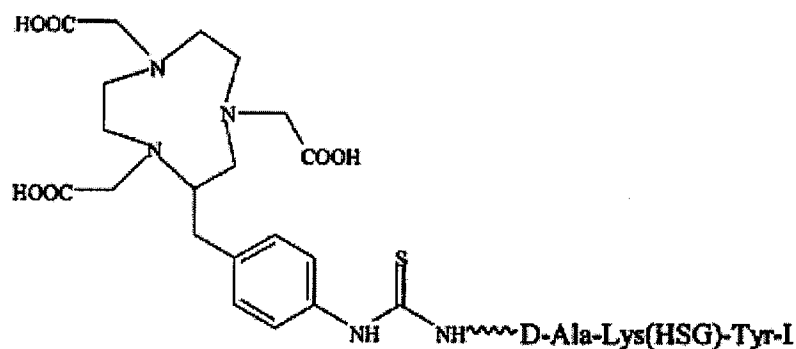
67. (withdrawn) The method of claim 66, wherein the diagnostic assay is RT-PCR or immunoassays.

68. (withdrawn) The method of claim 67, wherein the specimen is body fluid or a tissue or cell population.
69. (withdrawn) The method of claim 66, wherein the diagnostic assay is immunohistochemistry or immunocytochemistry.
70. (withdrawn) The method of claim 69, wherein the specimen is a cell aliquot or a tissue.
71. (withdrawn) The method of claim 65 wherein the subject is a mammal.
72. (withdrawn) The method of 71, wherein the subject is a human.
73. (withdrawn) The method of 71, wherein the subject is a domestic pet.
74. (withdrawn) The method of 71, wherein the subject is selected from the group consisting of a horse, dog, and cat.
75. (withdrawn, currently amended) A method for detecting or treating cancer or an ischemic lesion expressing a target that can be recognized by a antibody~~Mab~~ or fragment thereof that binds NCA90 in a mammal, comprising: (A) administering an effective amount of a bispecific antibody or antibody fragment comprising at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1, and (B) administering a targetable conjugate selected from the group consisting of (i) DOTA-Phe-Lys(HSG)-D-Tyr-Lys(HSG)-NH<sub>2</sub>; (ii) DOTA-Phe-Lys(HSG)-Tyr-Lys(HSG)-NH<sub>2</sub> (SEQ ID NO: 7); (iii) Ac-Lys(HSG)-D-Tyr-Lys(HSG)-Lys(Tscg-Cys)-NH<sub>2</sub>; (iv) DOTA-D-Asp-D-Lys(HSG)-D-Asp-D-Lys(HSG)-NH<sub>2</sub>; (v) DOTA-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (vi) DOTA-D-Tyr-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (vii) DOTA-D-Ala-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (viii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-NH<sub>2</sub>; (ix) Ac-D-Phe-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-NH<sub>2</sub>; (x) Ac-D-Phe-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH<sub>2</sub>; (xi) Ac-D-Phe-D-Lys(Bz-DTPA)-D-Tyr-D-Lys(Bz-DTPA)-NH<sub>2</sub>;

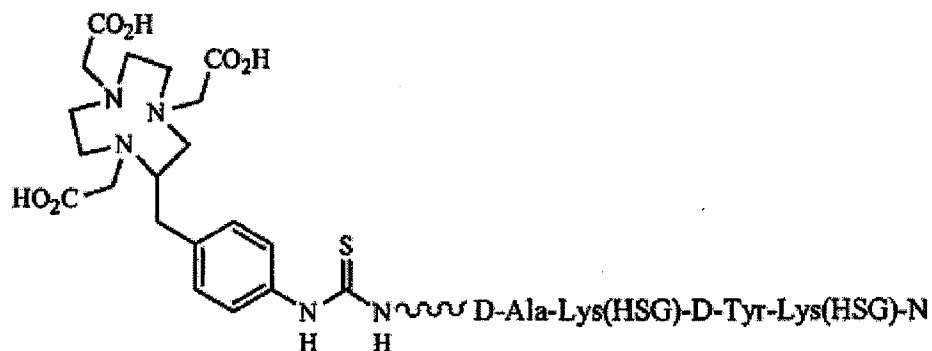


(xii) Ac-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH<sub>2</sub>; (xiii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH<sub>2</sub>; (xiv) (Tscg-Cys)-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(DOTA)-NH<sub>2</sub>; (xv) Tscg-D-Cys-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (xvi) (Tscg-Cys)-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (xvii) Ac-D-Cys-D-Lys(DOTA)-D-Tyr-D-Ala-D-Lys(DOTA)-D-Cys-NH<sub>2</sub>; (xviii) Ac-D-Cys-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH<sub>2</sub>; (xix) Ac-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-D-Lys(TscG-Cys)-NH<sub>2</sub>; (xx) Ac-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-D-Lys(TscG-Cys)-NH<sub>2</sub>;

(xxi)

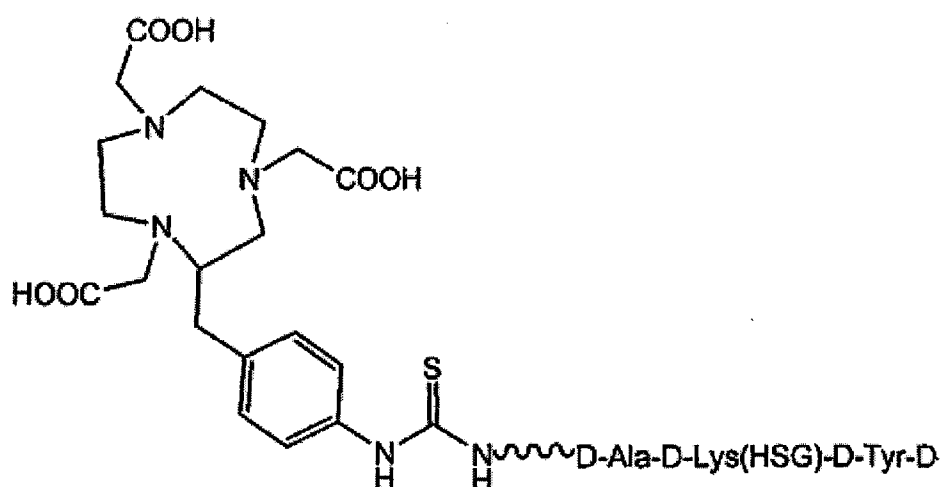


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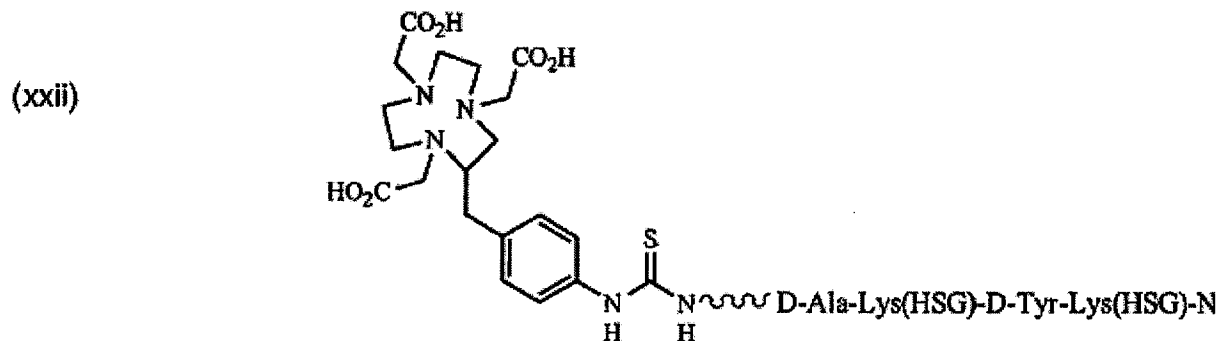
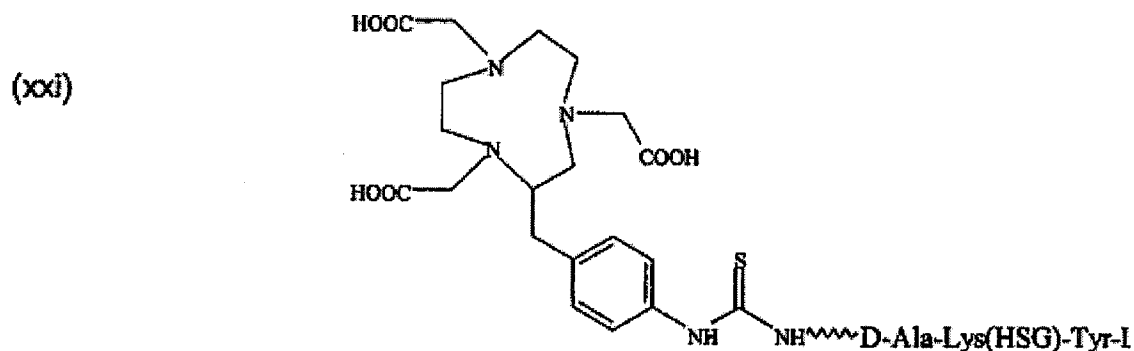
76. (withdrawn) A method of claim 75, further comprising administering to the subject a clearing composition, and allowing the composition to clear non-localized antibodies or antibody fragments from circulation.

77. (currently amended) A kit useful for treating or identifying diseased tissues in a subject comprising: (A) a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment thereof according to claim 3a ~~granulocyte antibody or fragment thereof~~; (B) a first targetable conjugate which comprises a carrier portion which comprises or bears at least one epitope recognizable by the at least one other arm of the bi-specific antibody or antibody fragment, and one or more conjugated therapeutic or diagnostic agents; and (C) optionally, a

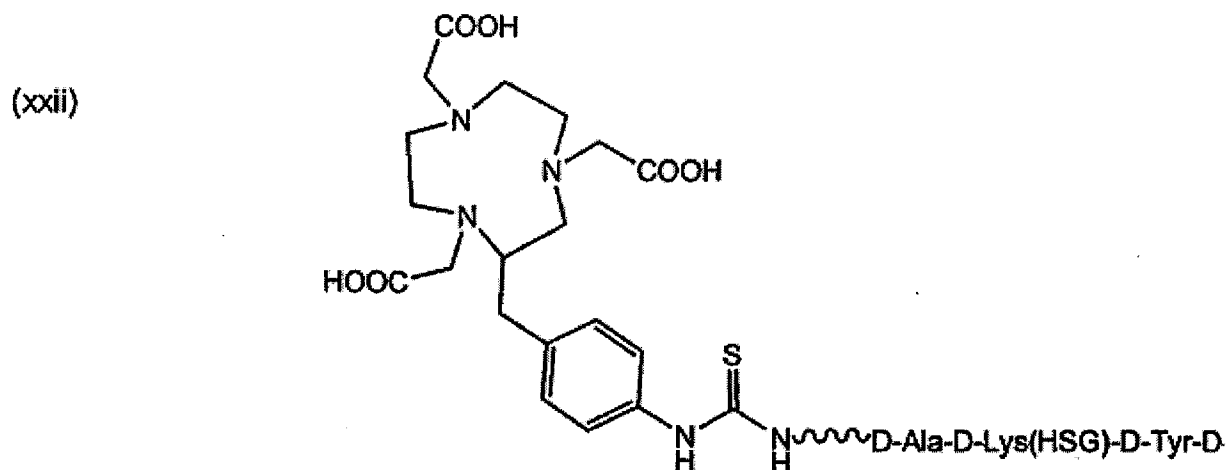
clearing composition useful for clearing non-localized antibodies and antibody fragments; and (D) optionally, when the therapeutic agent conjugated to the first targetable conjugate is an enzyme, (i) a prodrug, when the enzyme is capable of converting the prodrug to a drug at the target site; or (ii) a drug which is capable of being detoxified in the subject to form an intermediate of lower toxicity, when the enzyme is capable of reconvertng the detoxified intermediate to a toxic form, and, therefore, of increasing the toxicity of the drug at the target site, or (iii) a prodrug which is activated in the subject through natural processes and is subject to detoxification by conversion to an intermediate of lower toxicity, when the enzyme is capable of reconvertng the detoxified intermediate to a toxic form, and, therefore, of increasing the toxicity of the drug at the target site, or (iv) a second targetable conjugate which comprises a carrier portion which comprises or bears at least one epitope recognizable by the at least one other arm of the bi-specific antibody or antibody fragment, and a prodrug, when the enzyme is capable of converting the prodrug to a drug at the target site.

78. (currently amended) The kit of claim 77, wherein the targetable conjugate is selected from the group consisting of: ~~(A) administering an effective amount of a bispecific antibody or antibody fragment comprising at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1, and (B) administering a targetable conjugate selected from the group consisting of~~ (i) DOTA-Phe-Lys(HSG)-D-Tyr-Lys(HSG)-NH<sub>2</sub>; (ii) DOTA-Phe-Lys(HSG)-Tyr-Lys(HSG)-NH<sub>2</sub> (SEQ ID NO: 7); (iii) Ac-Lys(HSG)-D-Tyr-Lys(HSG)-Lys(Tscg-Cys)-NH<sub>2</sub>; (iv) DOTA-D-Asp-D-Lys(HSG)-D-Asp-D-Lys(HSG)-NH<sub>2</sub>; (v) DOTA-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (vi) DOTA-D-Tyr-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (vii) DOTA-D-Ala-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (viii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-NH<sub>2</sub>; (ix) Ac-D-Phe-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-NH<sub>2</sub>; (x) Ac-D-Phe-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH<sub>2</sub>; (xi) Ac-D-Phe-D-Lys(Bz-DTPA)-D-Tyr-D-Lys(Bz-DTPA)-NH<sub>2</sub>; (xii) Ac-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH<sub>2</sub>; (xiii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH<sub>2</sub>; (xiv) (Tscg-Cys)-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(DOTA)-NH<sub>2</sub>; (xv) Tscg-D-Cys-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (xvi) (Tscg-Cys)-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (xvii) Ac-D-Cys-D-Lys(DOTA)-D-

Tyr-D-Ala-D-Lys(DOTA)-D-Cys-NH<sub>2</sub>; (xviii) Ac-D-Cys-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH<sub>2</sub>; (xix) Ac-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-D-Lys(TscG-Cys)-NH<sub>2</sub>; (xx) Ac-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-D-Lys(TscG-Cys)-NH<sub>2</sub>;



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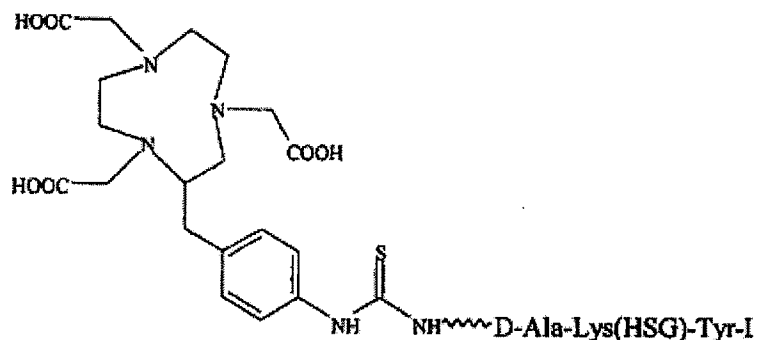


79. (withdrawn) A method of screening for a targetable conjugate comprising: (A) contacting the targetable construct with a bi-specific antibody or antibody fragment having at least one arm

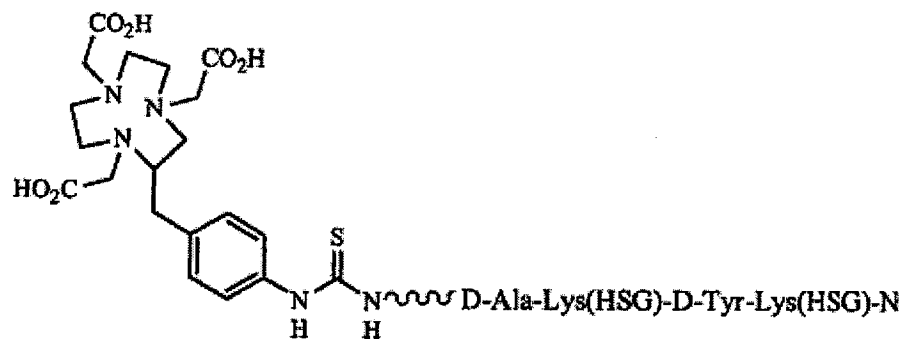
that specifically binds a targeted tissue and at least one other arm that specifically binds the targetable conjugate to give a mixture, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1; and (B) optionally incubating the mixture; and (C) analyzing the mixture.

80. (withdrawn, currently amended) A method for imaging malignant or ischemic tissue or cells in a mammal expressing an antigen recognized by a antibody~~Mab~~ or fragment thereof that binds NCA90, comprising: (A) administering an effective amount of a bispecific antibody or antibody fragment comprising at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1; and (B) administering a targetable conjugate selected from the group consisting of (i) DOTA-Phe-Lys(HSG)-D-Tyr-Lys(HSG)-NH<sub>2</sub>; (ii) DOTA-Phe-Lys(HSG)-Tyr-Lys(HSG)-NH<sub>2</sub> (SEQ ID NO: 7); (iii) Ac-Lys(HSG)-D-Tyr-Lys(HSG)-Lys(Tscg-Cys)-NH<sub>2</sub>; (iv) DOTA-D-Asp-D-Lys(HSG)-D-Asp-D-Lys(HSG)-NH<sub>2</sub>; (v) DOTA-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (vi) DOTA-D-Tyr-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (vii) DOTA-D-Ala-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (viii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-NH<sub>2</sub>; (ix) Ac-D-Phe-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-NH<sub>2</sub>; (x) Ac-D-Phe-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH<sub>2</sub>; (xi) Ac-D-Phe-D-Lys(Bz-DTPA)-D-Tyr-D-Lys(Bz-DTPA)-NH<sub>2</sub>; (xii) Ac-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH<sub>2</sub>; (xiii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH<sub>2</sub>; (xiv) (Tscg-Cys)-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(DOTA)-NH<sub>2</sub>; (xv) Tscg-D-Cys-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (xvi) (Tscg-Cys)-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH<sub>2</sub>; (xvii) Ac-D-Cys-D-Lys(DOTA)-D-Tyr-D-Ala-D-Lys(DOTA)-D-Cys-NH<sub>2</sub>; (xviii) Ac-D-Cys-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH<sub>2</sub>; (xix) Ac-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-D-Lys(TscG-Cys)-NH<sub>2</sub>; (xx) Ac-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-D-Lys(TscG-Cys)-NH<sub>2</sub>;

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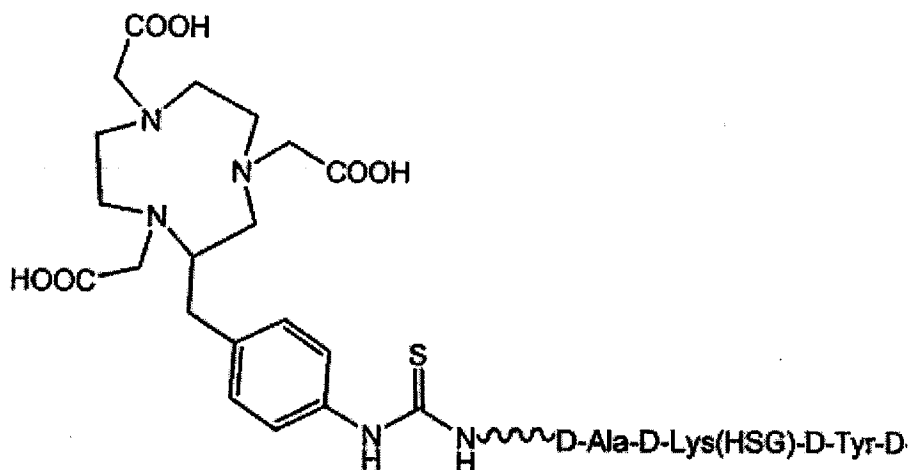


(xxii)



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81. (withdrawn) A method of detecting or treating a condition selected from the group consisting of infection, inflammation, myeloid leukemias and infiltration of the bone marrow with metastatic cancer cells comprising administering an antibody or fragment thereof of claim 1 to a subject.

82. (withdrawn) The method of claim 81 further comprising detecting whether the antibody or

fragment thereof binds to a target.

83. (withdrawn, currently amended) The method of claim 81, wherein the antibodyMab or fragment thereof is MN3 and is selected from the group consisting of a chimeric MN3, a humanized MN3, a human MN3, a murine MN3, and a fusion protein comprising MN3.

84. (withdrawn) The method of claim 81, wherein said infection or inflammation is the result of cystic fibrosis in said subject.

85. (withdrawn, currently amended) The method of claim 81, wherein said antibodyMab or fragment thereof is bound to at least one diagnostic agent.

86. (withdrawn) The method of claim 85, wherein said diagnostic agent is selected from the group consisting of a radioisotope, an enzyme, a fluorescent label, a chemiluminescent label, a bioluminescent label and a paramagnetic label.

87. (withdrawn) The method of claim 85, wherein said diagnostic agent is selected from the group consisting of an  $\gamma$ -emitting radioisotope, a positron-emitting ( $\beta^+$ ) radioisotope, an x-ray or computed tomography-enhancing contrast agent, a fluorescent-emitting compound, an MRI contrast agent, and/or an ultrasound enhancing agent.

88. (withdrawn) The method of claim 85, wherein said diagnostic agent is a radionuclide, wherein said radionuclide has a decay energy in the range of 20 to 4,000 keV.

89. (withdrawn) The method of claim 88, wherein said radionuclide is selected from the group consisting of  $^{11}\text{C}$ ,  $^{13}\text{N}$ ,  $^{15}\text{O}$ ,  $^{18}\text{F}$ ,  $^{32}\text{P}$ ,  $^{51}\text{Mn}$ ,  $^{52\text{m}}\text{Mn}$ ,  $^{52}\text{Fe}$ ,  $^{55}\text{Co}$ ,  $^{62}\text{Cu}$ ,  $^{64}\text{Cu}$ ,  $^{67}\text{Cu}$ ,  $^{67}\text{Ga}$ ,  $^{68}\text{Ga}$ ,  $^{72}\text{As}$ ,  $^{75}\text{Br}$ ,  $^{76}\text{Br}$ ,  $^{82\text{m}}\text{Rb}$ ,  $^{83}\text{Sr}$ ,  $^{86}\text{Y}$ ,  $^{89}\text{Zr}$ ,  $^{94\text{m}}\text{Tc}$ ,  $^{94}\text{Tc}$ ,  $^{99\text{m}}\text{Tc}$ ,  $^{110}\text{In}$ ,  $^{111}\text{In}$ ,  $^{120}\text{I}$ ,  $^{123}\text{I}$ ,  $^{124}\text{I}$ ,  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{154-158}\text{Gd}$ ,  $^{177}\text{Lu}$ ,  $^{186}\text{Re}$ ,  $^{198}\text{Au}$ ,  $^{201}\text{Tl}$ , or other gamma-, beta-, or positron-emitters.

90. (withdrawn) The method of claim 88, wherein said radionuclide is selected from the group consisting of  $^{51}\text{Cr}$ ,  $^{57}\text{Co}$ ,  $^{58}\text{Co}$ ,  $^{59}\text{Fe}$ ,  $^{75}\text{Se}$ ,  $^{97}\text{Ru}$ ,  $^{114\text{m}}\text{In}$ ,  $^{169}\text{Yb}$ , and  $^{197}\text{Hg}$ .

91. (withdrawn) The method of claim 86, wherein said radioisotope emits in the range of about 10 keV to about 5,000 keV.
92. (withdrawn) The method of claim 91, wherein said radioisotope is selected from the group consisting of Iodine-126, Bromine-77, Indium-113m, Ruthenium-95, Ruthenium-103, Ruthenium-105, Tellurium-121m, Tellurium-122m, Tellurium-125m, Thulium-165, Thulium-167, Thulium-168, Silver-111, Platinum-197, Palladium-109, Phosphorus-33, Scandium-47, Samarium-153, Lutetium-177, Rhodium-105, Praseodymium-142, Praseodymium-143, Terbium-161, Holmium-166, Gold-199, Cobalt-58, Chromium-51, Iodine-123, Iodine-131, Indium-111, Gallium-67, Gallium-68, Ruthenium-97, Technetium-99m, Cobalt-57, Cobalt-58, Chromium-51, Iron-59, Selenium-75, Thallium-201, Fluorine-18, Technetium-94m and Ytterbium-169, and Iodine-125.
93. (withdrawn) The method of claim 88, wherein said paramagnetic label comprises a metal selected from the group consisting of chromium (III), manganese (II), iron (III), iron (II), cobalt (II), nickel (II), copper (II), neodymium (III), samarium (III), ytterbium (III), gadolinium (III), vanadium (II), terbium (III), dysprosium (III), holmium (III) and erbium (III).
94. (withdrawn) The method of claim 85, wherein said diagnostic agent is a radiopaque compound.
95. (withdrawn) The method of claim 84, wherein said radiopaque compound is selected from the group consisting of iodine compounds, barium compounds, gallium compounds and thallium compounds.
96. (withdrawn) The method of claim 95, wherein said radiopaque compound is selected from the group consisting of barium, diatrizoate, ethiodized oil, gallium citrate, iocarmic acid, iocetamic acid, iodamide, iodipamide, iodoxamic acid, iogulamide, iohexol, iopamidol, iopanoic acid, ioprocemic acid, iosefamic acid, ioseric acid, iosulamide meglumine, iosemetic acid, iotasul, iotetric acid, iothalamic acid, iotroxic acid, ioxaglic acid, ioxotrizoic acid, ipodate,



meglumine, metrizamide, metrizoate, propylidone, and thallous chloride.

97. (withdrawn) The method of claim 87, wherein said ultrasound enhancing agent is a liposome.

98. (withdrawn) The method of claim 97, wherein said liposome is gas filled.

99. (withdrawn) The method of claim 85, wherein said diagnostic agent is a radiological contrast agent useful for magnetic resonance imaging.

100. (withdrawn) The method of claim 99, wherein said radiological contrast agent is selected from the group consisting of gadolinium, manganese, dysprosium, lanthanum, iron, chromium, copper, cobalt, nickel, rhenium, europium, terbium, holmium, or neodymium.

101. (withdrawn) The method of claim 86, wherein said fluorescent label is selected from the group consisting of rhodamine, fluorescein, renographin, fluorescein isothiocyanate, phycoerytherin, phycocyanin, allophycocyanin, o-phthaldehyde and fluorescamine.

102. (withdrawn) The method of claim 86, wherein said chemiluminescent label is selected from the group consisting of luminol, isoluminol, an aromatic acridinium ester, an imidazole, an acridinium salt and an oxalate ester.

103. (withdrawn) The method of claim 86, wherein said bioluminescent label is selected from the group consisting of luciferin, luciferase and aequorin.

104. (withdrawn) The method of claim 86, wherein said enzyme is selected from the group consisting of malate dehydrogenase, staphylococcal nuclease, delta-V-steroid isomerase, yeast alcohol dehydrogenase,  $\alpha$ -glycerophosphate dehydrogenase, triose phosphate isomerase, horseradish peroxidase, alkaline phosphatase, asparaginase, glucose oxidase,  $\beta$ -galactosidase, ribonuclease, urease, catalase, glucose-6-phosphate dehydrogenase, glucoamylase and acetylcholinesterase.

105. (withdrawn, currently amended) The method of claim of 81, further comprising administering to said subject concurrently or sequentially a therapeutically effective amount of a therapeutic conjugate comprising at least one antibodyMab bound to at least one therapeutic agent, wherein said antibodyMab comprises at least one humanized, chimeric, human or murine antibodyMab selected from the group consisting of BW 250/183, MN-2, MN-15, NP-2, NP-1 and anti-CD15 formulated in a pharmaceutically acceptable vehicle.

106. (withdrawn) The method of claim 81, wherein said antibody or fragment thereof is administered before, in conjunction with, or after a second anti-granulocyte antibody.

107106. (withdrawn, currently amended) The method of claim 81, wherein said antibody or fragment thereof is administered before, concurrently or after a therapeutic or diagnostic agent.